

distinguish *Q. malabarica* from *Q. indica* L. by tetramerous flowers. But in my specimens, the flowers are consistently pentamerous. Moreover, there is no reference to tetramerous flowers in *Q. malabarica* in the floras cited above.

**Fl. and Fr.:** January-March.

**Exsiccata:** Dakshina Kannada district: Panaje, growing near an arecanut garden, January 29, 2000, *K.G. Bhat* 11346.

3. *Scaevola plumieri* (L.) Vahl, *Symb. Bot.* 2: 36. 1791; Gamble, *Fl. Pres. Madras* 734. 1921. *S. lobelia* Murr., *Syst. Veg.* ed. 13, 1774, *nom. illeg.*; Clarke in Hook.f., *Fl. Brit. Ind.* 3: 421. 1881; Cooke, *Fl. Pres. Bomb.* 2: 70. 1904. *Lobelia plumieri* L. *Sp. Pl.* 929. 1753, *p.p.* (GOODENIACEAE).

A rare sand-dune plant, collected near the sea from Padubidri. It closely resembles *S. sericea* Vahl, but the leaves are smaller and the drupe is purple.

**Fl. and Fr.:** June-December.

**Exsiccata:** Udupi district: Padubidri, growing near the sea on sand, August 10, 1999, *K.G. Bhat* 11311.

4. *Spermacoce assurgens* Ruiz & Pavon,

*Fl. Peru* 1: 60, t. 92. 1798; Sivarajan *et al.*, *Proc. Indian Acad. Sci. (Plant Sci.)* 97(4): 351, fig. 44-50. 1987. *S. laevis* sensu auct. mult.: Verdc., *Fl. Trop. E. Africa Rubiac.* 1: 357. 1976; Deb & Dutta, *J. Econ. Tax. Bot.* 5: 1051. 1984, non Lam. 1792. *Borreria laevis* auct. mult.: Bremekamp in Pulle, *Fl. Suriname* 4: 289. 1934, non (Lam.) Griseb. 1861 (RUBIACEAE).

A native of tropical America. In India, so far, known only from Kerala and Nicobar Islands.

**Fl. and Fr.:** October-November.

**Exsiccata:** Dakshina Kannada district: Mangalore, growing along the roadside, October 25, 1999, *K.G. Bhat* 11335.

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#### 47. SOME NEW RECORDS FOR THE STATE OF MAHARASHTRA

During extensive and intensive plant exploration in Maharashtra, 2 species of *Eriocaulon*, namely *Eriocaulon martianum* Wall. ex Koern., and *E. palghatense* Ans. & Balak., and 2 species of *Utricularia*, namely *Utricularia malabarica* Janarthanam & Henry, and *U. minutissima* Vahl were collected, which form new records for the State.

The voucher specimens are deposited in the Herbarium of the Shivaji University, Kolhapur (SUK).

*Eriocaulon martianum* Wall. ex Koern., *Linnaea* 27: 642. 1856; Ans. and Balak. *Fam. Eriocaul.* India 107. 1944; Cook, *Aquatic and Wetland Plants of India*, 197. 1996. *E. quinquangulare* var. *martianum* (Wallich) Fyson,

*J. Ind. Bot.* 1: 204. 1921.

Erect acaulescent herb. Leaves long, linear acuminate, glabrous. Peduncles glabrous. Head 3-4 mm across, globose-subglobose. Receptacle columnar villous. Involucral bracts erect, elliptic, acute, chartaceous, glabrous, straw coloured. Floral bracts, oblanceolate-cuneate, acuminate, chartaceous, hairy towards apex, grey. Male flowers: sepals 3, connate to form open spathe, obovate, 3-lobed, lobes acute, grey, glabrous. Petals 3, subequal, ovate, hairy, each with black gland. Anthers 6, globose, black. Female flowers: pedicels minute; sepals 3, free, elliptic, falcate, flat, acute, equal, glabrous or sparsely hairy. Petals 3, free, equal, spatulate, obtuse or acute, hyaline, sparsely hairy. Ovary stalked, obovoid-

globose; style 3-fid. Seeds oblong-obovoid, obtuse; cells of seed coat transversely elongated, aligned in vertical rows; appendages ribbon-like band or rectangular structures from transverse radial wall.

**Fl. & Fr.:** September-December.

**Specimen Examined:** Bhuskute 224.

**Distribution:** Hazara falls, Darekasa in Bhandara district.

**Note:** Earlier it was known from Madhya Pradesh and West Bengal.

*Eriocaulon palghatense* Ans. & Balak. Fam. Eriocaul. India 111, f. 37. 1994.

Erect, acaulescent herb. Leaves linear, acute or subacuminate, glabrous. Peduncles few to many, glabrous. Head 1.5-2 mm across, ovoid or globose, black. Receptacle globose or cylindrical, glabrous. Involucral bracts oblong-obovate, obtuse or rounded at apex, entirely black, glabrous, chartaceous. Floral bracts oblanceolate, acute or subacute, hairy towards apex, grey or black. Male flowers: pedicels minute. Sepals 3, united into spathe, 3-lobed, obovate; lobes obtuse, hairy towards apex, black. Petals 3, minute, glabrous, each with black gland. Anthers 6, black. Female flowers: sepals 3, equal, free, linear-lanceolate, acute or subobtuse, black, hairy at apex. Petals 3, free, linear-spathulate, obtuse or subacute, hyaline. Ovary ovoid-ellipsoid; style 3-fid; stigma filiform. Seeds oblong, obtuse; cells of seed coat transversely elongated, arranged in vertical rows; appendages ribbon-like band from transverse radial wall.

**Fl. & Fr.:** July-September.

**Specimen Examined:** Gaikwad 5101.

**Distribution:** Achirne and Malwan in Sindhudurg, Hatkhamba and Pavas in Ratnagiri district.

**Note:** Earlier it was known only from the type locality in Kerala.

*Utricularia malabarica* M.K. Janarthanam & A.N. Henry in J. Bombay nat. Hist. Soc. 86(1): 84. 1989; Janarthanam & Henry in Bladderworts of India, 68-69. 1992.

Herb; rhizoids glandular, branched. Leaves 3-nerved, obovate, rounded at apex. Traps globose; mouth basal with two simple subulate, glandular appendages. Racemes 2-5 cm long, 1-4 flowered; bracts basifixed, one nerved; pedicels winged, erect in anthesis and recurved in fruit. Calyx lobes ovate; upper lobe acuminate at apex; lower lobe 2-3-dentate at apex. Corolla blue with white tinge; upper lip truncate at apex; lower lip suborbicular, bigibbous at base and hairy in throat; spur slender, acute at apex. Capsule ovoid, uniformly membranous. Seeds ovoid; testa reticulate, cells elongated, smooth.

**Fl. & Fr.:** August-December.

**Specimen Examined:** Sardesai 289.

**Distribution:** Achirne, Malvan, Vaibhavwadi in Sindhudurg, Hatkhamba and Masebav in Ratnagiri district.

**Note:** Earlier it was known from Kerala, Karnataka and Goa.

*Utricularia minutissima* Vahl, Enum. Pl. 1: 204. 1804; Janarthanam & Henry in Bladderworts of India, 72-74. 1992. Cook, Aquatic and Wetland Plants of India, 241. 1996.

Herb; rhizoids simple, glandular, rarely branched; stolons glandular, sparsely branched. Leaves linear, 1-nerved. Traps subglobose; mouth lateral, circular with one subulate appendage. Racemes 2-3 cm long, 1-4 flowered. Scales and bracts basifixed; pedicels terete, erect. Calyx lobes slightly unequal, ovate, hooded, papillose outside; upper lobe obtuse at apex; lower lobe notched at apex. Corolla pink with white tinge; upper lip oblong, ciliate along margins, rounded; lower lip shallowly 3-lobed, raised at base and hairy in throat; spur straight, horizontal, notched at apex. Capsule obliquely ovoid, compressed, uniformly membranous. Seeds globose, testa cells more or less isodiametric.

**Fl. & Fr.:** August-September.

**Specimens Examined:** Bhuskute 554, Sardesai 294.

**Distribution:** Achirne, Malvan, Shiroda in Sindhudurg, Pali, Hatkhamba, Masebav in

Ratnagiri, and Gonditola in Bhandara district.

**Note:** Earlier it was known from Goa, Karnataka, Kerala, Orissa, Tamil Nadu, and Uttar Pradesh.

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## 48. ADDITIONS TO THE GRASSES OF MAHARASHTRA

(With three text-figures)

During our survey of southwestern Maharashtra, three species of grasses were recorded for the first time for the state of Maharashtra. Short descriptions and illustrations have been provided for each of them. The specimens have been deposited in the Herbarium of Shivaji University, Kolhapur.

1. *Bhidea fischeri* P.V. Sreekumar & B.V. Shetty in Kew Bull. 42(3): 683-685. 1987. Fig. 1.

Annual, tufted, 15-35 cm tall, simple or branched; upper nodes villous, lower glabrous. Leaves lanceolate, 2-7 x 0.1-0.5 cm, acute. Racemes 2, 3-7 cm long; joints villous on one side. Sessile spikelets lanceolate, 9-10.5 mm long, awned; callus acute, densely silky villous. Lower glume lanceolate, 5-nerved, acuminate. Upper glume oblong, 3-lobed at apex with 4-5 mm long arista. Lower lemma ovate-lanceolate, 3-nerved, keels winged, epaleate. Upper lemma oblong-elliptic, 3-nerved, apex notched, awn geniculate, 55-65 mm long. Palea ovate, subacute. Lodicules 2. Stamen 2. Pedicels turbinate, villous on one side. Pedicelled spikelets empty, oblique, lanceolate, 8-10 mm long. Lower

glume lanceolate, 7-9 nerved, acuminate. Upper glume lanceolate, 3-nerved, acuminate.

A rare grass growing on lateritic plateaux.

**Fl. & Fr.:** August-October.

**Distribution:** Ratnagiri: Pawas, *Salunkhe* 8227; Sindhudurg: Devgad, *Yadav* 8387.

2. *Chloris pycnothrix* Trin. Gram. Unifl. 234. 1824; Brito & Mathew in Mathew, Fl. Tamil. Carnatic 3: 1821. 1983 Fig. 2.

Annual, tufted, 15-55 cm tall, simple or branched. Leaves broadly linear, 1-10 x 0.2-0.6 cm, apex mucronate. Spikes 3-5, digitate, 2-5 cm long; rachis filiform. Spikelets closely pectinate, subsessile, ovate-lanceolate, 1.8-3.2 mm long. Lower glume ovate-lanceolate, 1-nerved, acuminate. Upper glume ovate-lanceolate, 1-nerved, acuminate. Lower lemma ovate-lanceolate, 1-nerved, apex notched, 2-toothed, awn capillary, 6-20 mm long. Palea linear-lanceolate, 2-nerved, acute. Rachilla slender, hairy, lodicules 2, stamens 3.

A rare grass growing near moist places.

**Fl. & Fr.:** September-December.

**Distribution:** Satara: Pusegaon, *Salunkhe* 8657.